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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,451	07/27/2006	Ryuichiro Amano	DK-US065159	2263

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EXAMINER	
ZOLLINGER, NATHAN C	
ART UNIT	PAPER NUMBER
3746	
MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/587,451	AMANO, RYUICHIRO	
	Examiner	Art Unit	
	NATHAN ZOLLINGER	3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 June 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 4-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 4-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Detailed Action

Response to Amendment

The amendment filed on June 17, 2010 has been entered. Claims 1 and 5-6 have been amended. Claims 1 and 4-6 are pending in this application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

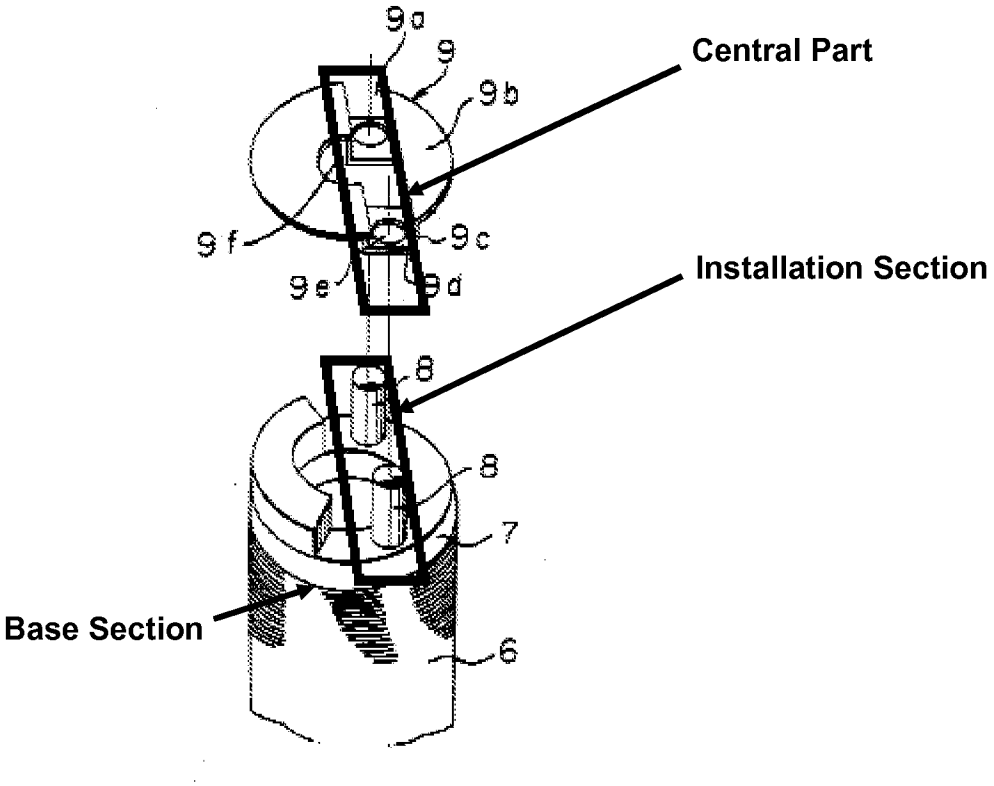
> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Muramatsu (US 4,717,316) in view of Speakman (US 3,936,205).

Claim 1: Muramatsu discloses a compressor comprising a closed container (Fig. 1); a compressor element section (3) housed in a lower portion of the closed container; and an electric motor element section (2) housed in an upper portion of the closed container and including a rotor (6) having an upper end surface, a stator (11) disposed on an outer periphery of the rotor, an end plate (7) provided on the upper end surface of the rotor, and an oil separation plate (9) installed on the end plate and forming a through hole (9e), the end plate including a main section (7) and a projection (8) projecting from the main section and fitted in the through hole, the main section including a base section (see Figure 3, below) placed on the upper end surface of the rotor and an

installation section (see centrally located "Installation Section" rectangle in Fig. 3, below) provided on a center portion of an upper face of the base section, the projection projecting upward from an upper face of the installation section (Fig. 3), the oil separation plate including a central part (see "Central Part" rectangle in Fig. 3, below) having the through hole and a peripheral part (9b) opposed to and spaced from the upper face of the base section of the end plate (Fig. 3), the projection of the end plate including a projected part (portion of 8 inserted and caulked into 9e) projected from the through hole of the oil separation plate, the projection being crushed (caulking process, col. 3, lines 36-37) to integrate the oil separation plate with the end plate. Muramatsu does not disclose a cone-shaped recess on an upper face of the projection which is partly crushed to remain a portion of the cone-shaped recess, a bottom portion of the cone-shaped recess existing in a state of the projection being crushed. Speakman teaches a cone-shaped recess (41) and a bottom portion which remains after crushing (col. 4, lines 19-22). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ a recess as taught by Speakman so that the recess "can later act as an identifier or as a center if it is desired to drill out the [projection]" (col. 4, lines 19-22).

FIGURE 3



Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Muramatsu (US 4,717,316) in view of Speakman (US 3,936,205) and in further view of Uchibori (US 5,666,015).

Claim 4: Muramatsu and Speakman teach the limitations of claim 1, discussed previously. Muramatsu does not disclose a projection made of aluminum. Uchibori teaches making a compressor projection from aluminum (col. 6, lines 40-43). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to make a projection from aluminum to realize weight savings from this lightweight metal.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Muramatsu (US 4,717,316) in view of Uchibori (US 5,666,015) and in further view of Neill (US 3,505,923), Speakman (3,936,205), Tajima (JP45026515) or Takayama (JP20010515).

Claim 5: Muramatsu discloses a method of plate installation comprising mounting a plate member (9) on a supporting base plate (7) by fitting a projection (8) of the supporting base plate into a through hole (9e) of the plate member to project a top end part of the projection from the through hole, and crushing a projected part of the projection from the through hole by applying a downward pressing force to the projected part so as to integrate the plate member with the supporting base plate (caulking process, col. 3, lines 36-37). Muramatsu does not disclose a projection made of aluminum. Uchibori teaches making a compressor projection from aluminum (col. 6, lines 40-43). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to make a projection from aluminum to realize weight savings from this lightweight metal. Muramatsu also does not disclose a cone-shaped recess located on an upper face of the projection which remains (at least a bottom portion) after caulking the projection. Examiner appeals to several references that teach a cone-shaped recess:

Neill teaches a projection with a cone-shaped recess (32, Figs. 1 and 4, Examiner broadly interprets "cone-shaped recess" to possibly include the shape outlined by both 40 and 36; col. 3, lines 17-19, 27, Examiner also notes that the conical recess could reasonably include radiused portion, 36), which recess (or a bottom

portion) remain after being crushed (32, Figs. 7 and 9, Examiner notes that in Fig. 9 the conical wall 40 remains even after crushing). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ a recess as taught by Neill into the compressor of Uchibori since such a recess acts to cause a uniform flow of material throughout the projection, improving the strength of the projection (col. 3, lines 48-63). Moreover, the recess prevents the head portion from being at an undue thickness near the collar section (col. 3, lines 49-51) ensuring that a uniform flow of material exists throughout the fastener, which improves the overall strength of the projection and avoid commonly encountered fracture lines (Figs. 4-5, col. 3, lines 49-63).

Speakman teaches a cone-shaped recess (41) and a bottom portion which remains after crushing (col. 4, lines 19-22). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ a recess as taught by Speakman so that the recess "can later act as an identifier or as a center if it is desired to drill out the [projection]" (col. 4, lines 19-22)

Tajima teaches a cone-shaped recess (2) and a bottom portion which remains after crushing (Fig. 2). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ a recess as taught by Tajima in order to allow removal the crushed portion and subsequent reattachment with a fastener (see page 4 of translation).

Takayama teaches a cone-shaped recess (Fig. 1 and Fig. 10, 14) and a bottom portion which remains after crushing (Fig. 10). It would have been obvious at the time

the invention was made to a person having ordinary skill in the art to employ a recess as taught by Takayama in order to reduce the material needed in the projection thereby saving weight/cost.

Applicant further requires specific size parameter which are singly disclosed in the various prior art of record (e.g., Tajima has an opening diameter (element 2) of 50% and Neill has a depth (element 32) of 10 to 15%. These disclosures notwithstanding, it would have been obvious matter of design choice to adjust the dimensions of the cone recess, since such a modification would have involved a mere change in the size of a component. A change is size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237, (CCPA 1955). Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to undertake recess re-sizing, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 167 F.2d 272, 205 USPQ 215 (CCPA 1980).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Muramatsu (US 4,717,316) in view of Neill (US 3,505,923), Speakman (3,936,205), Tajima (JP45026515) or Takayama (JP20010515).

Claim 6: Muramatsu discloses a compressor comprising a closed container (Fig. 1); a compressor element section (3) housed in a lower portion of the closed container; and an electric motor element section (2) housed in an upper portion of the closed container and including a rotor (6) having an upper end surface, a stator (11) disposed on an outer periphery of the rotor, an end plate (7) provided on the upper end surface of

the rotor, and an oil separation plate (9) installed on the end plate and forming a through hole (9e), the end plate including a main section (7) and a projection (8) projecting from the main section and fitted in the through hole, the main section including a base section (see Figure 3, above) placed on the upper end surface of the rotor and an installation section (see centrally located "Installation Section" rectangle in Fig. 3, above) provided on a center portion of an upper face of the base section, the projection projecting upward from an upper face of the installation section, the oil separation plate including a central part (see "Central Part" rectangle in Fig. 3, above) having the through hole and a peripheral part (9b) opposed to and spaced from the upper face of the base section of the end plate, the projection of the end plate including a projected part (portion of 8 inserted and caulked into 9e) projected from the through hole of the oil separation plate

Neill teaches a projection with a cone-shaped recess (32, Figs. 1 and 4, Examiner broadly interprets "cone-shaped recess" to possibly include the shape outlined by both 40 and 36; col. 3, lines 17-19, 27, Examiner also notes that the conical recess could reasonably include radiused portion, 36), which recess (or a bottom portion) remain after being crushed (32, Figs. 7 and 9, Examiner notes that in Fig. 9 the conical wall 40 remains even after crushing). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ a recess as taught by Neill into the compressor of Uchibori since such a recess acts to cause a uniform flow of material throughout the projection, improving the strength of the projection (col. 3, lines 48-63). Moreover, the recess prevents the head portion from

being at an undue thickness near the collar section (col. 3, lines 49-51) ensuring that a uniform flow of material exists throughout the fastener, which improves the overall strength of the projection and avoid commonly encountered fracture lines (Figs. 4-5, col. 3, lines 49-63).

Speakman teaches a cone-shaped recess (41) and a bottom portion which remains after crushing (col. 4, lines 19-22). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ a recess as taught by Speakman so that the recess "can later act as an identifier or as a center if it is desired to drill out the [projection]" (col. 4, lines 19-22)

Tajima teaches a cone-shaped recess (2) and a bottom portion which remains after crushing (Fig. 2). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ a recess as taught by Tajima in order to allow removal the crushed portion and subsequent reattachment with a fastener (see page 4 of translation).

Takayama teaches a cone-shaped recess (Fig. 1 and Fig. 10, 14) and a bottom portion which remains after crushing (Fig. 10). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ a recess as taught by Takayama in order to reduce the material needed in the projection thereby saving weight/cost.

Applicant further requires specific size parameter which are singly disclosed in the various prior art of record (e.g., Tajima has an opening diameter (element 2) of 50% and Neill has a depth (element 32) of 10 to 15%. These disclosures notwithstanding, it

would have been obvious matter of design choice to adjust the dimensions of the cone recess, since such a modification would have involved a mere change in the size of a component. A change is size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237, (CCPA 1955). Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to undertake recess re-sizing, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 167 F.2d 272, 205 USPQ 215 (CCPA 1980).

Response to Arguments

Applicant's arguments with respect to claims 1 and 4-6 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NATHAN ZOLLINGER whose telephone number is 571-270-7815. The examiner can normally be reached on Monday - Thursday, 9 a.m. - 4 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on 571-272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Devon C Kramer/
Supervisory Patent Examiner, Art Unit 3746

/N. Z./
Examiner, Art Unit 3746